

No 1

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An*ſ*
Inaugural Dissertation
upon the
Introduction of Foreign Substances
into the Bloodvessels.

by
Edward Jenner Cox. Philad.

admitted March 3d. 1823 -

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In the present age when it is almost if not entirely impossible to mention a subject which has not engaged the attention of some of the brightest ornaments of that art, which has been the means of restoring an incalculable number of our fellow beings, to their families, their friends, & the world, & to add still more convincing proofs of the existence of that Supreme Being, without whose assistance, no art could flourish, nor any undertaking succeed.

When we see the difficulties arising from the introduction of a new medicine in the treatment of any particular disease, although recommended by men of acknowledged talents, long experience, extensive practice, & mature judgment, impossible is it for a young man to have that experience, which alone should authorize a Physician to proclaim to the medical world, that this medicine professes such properties, or that it is useful in this or that disease. Had I an inclination to write a dissertation upon any particular

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disease, what could I have said about the cause, symptoms, or treatment of that disease, that would have been either new, or interesting.

Considering it in this light, I have determined that the subject of my inaugural dissertation, shall be upon the introduction of foreign substances into the blood, before of living animals.

We will in the first place prove that this subject occupied the attention of some learned men, upwards of a Century ago; & that notwithstanding the positive denial of some of the present day, as to the possibility of introducing any substance into the blood, without producing death, the result of a majority of their experiments proves that the most acid & deleterious substances have been thrown into the blood, without any injurious effects arising therefrom; & that in a number of cases this has been resorted to as a means of cure, with the greatest success.

We will in the next place endeavour to apply it to the cure of some of the most violent diseases, by which the human frame is liable to be attacked.

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Dr. George Baglivi professor of Physick & Anatomy at Rom. when speaking of the impropriety of reasoning always from analogy, says that those reason correctly, who conclude that the observations made from experiments upon living animals, can be justly applied to the human frame, far to what do we owe the discovery of the circulation of the blood, the structure of the vessels, & many other important facts, but to those experiments, & the accuracy of the reasoning deduced from them.

In his dissertation upon the uses & abuse of blistering plasters, he performed several experiments upon Dogs, by introducing the S. of Cantharides into their Jugular veins. The experiments are given in the words of his translator.

Rome May 1692. I lay'd a Mastiff Dog upon a table, opened his right jugular vein & injected with a syringe two ounces of the S. of Cantharides, which I had made by taking two drachms of the powder of Cantharides, to six ounces of the water of Camom. Benedictus, digesting them three days upon ashes. Upon the beginning of the injection, the dog vomited watery & slimy matter, & voided a

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mouth a viscous sort of spittle, till I had finished the injection of two ounces, & sev'd up the wocana, & sprinkled it with burnt vitrol. This operation was no sooner over than he fell down, as if he had been dead. He refused to eat to the last minute of his life, & was extreme thirsty, insomuch that my steward moved ~~with~~ compunction gave him without my knowledge, about 6 quarts of water, which he drank & presently voided a great quantity of yellow urine. In the mean time he howled, & continued insensible thirsty, but we gave him no more water. Before his death he was seized with convulsions. He died after miserable howlings, the fourth day at night."

"Having opened his carcase, I found that part of the neck upon which we had made the experiment was perfectly mortified & fatid. In the right ventricle of the heart, the blood was very black & copious, with little or no coagulation, & some drops of oil as I wou'd upon the surface. We found there a small polypus continuing to a clot of blood. In the left ventricle of the heart we found a few little polypus, & the blood dissolved, but extreme black.

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in many of the other viscera were found. In the urine-bladder we found not the least bit of that slimy matter, nor were any gallstones in the inside of it; of course the quantity of the excretion was greater & full. The date is the 20th instant & it is now about 7 P.M. The stool is the same colour & somewhat black. The U. S. that I sent upon the setting of the veins of the ileum, was dry & black without any excretion & was covered with little drops like oil on the surface.

Do we not know that the application of the warm & warm, moist fomentations, & the poultice & the like, & that consist, mostly, of animal & vegetable matter, are resorted to, in order to relieve the pain, & the inflammation, arising from that stricture. Does not this go far to prove, that the same results will also be obtained, by the application of the infusion of the Fr. of Causticinal into the blood. By examining the appearance of the affection, we find a very good cause for the result of the 20th, independent of the quantity introduced, & acting in the body. That part of the neck where the incision was made, was found to be entirely mortified, & solid, & moreover, the incision, taking place, inflammation

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are the supererogatory, from the irritating properties
of the exhalations, or from the violence of the
burning. It can not be supposed that inflammation can contra-
dict either in this, and without extenuating its influence;
by exciting either upon heat, until it reaches the
pitch, & then it is evident that it becomes a cold.

It is not now in either case, a mere violent disease, & hence
with? & when either of them do occur, is not the circum-
sion more frequently fatal?

Expt 2^d I lay down upon a table, a young & vivacious dog, & injected into his right jugular vein, two ounces of the
1 saltnitrate. He remained in an state of sleep
longer, than the dog & master & wife ever before had. &
then when after he awoke out his long & far thirst, with a great
deal of anxiety, but I allowed him no water. He however
bore this thirst, out until next day. The tongue of the dog
was given, however, & it was open to his master &
found all the vessels swollen, but the blood was very black,
& sulphur, & covered in the surface, with little drops
like oil. The dog being young, & not very big, & was a man-

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being allowed here, the burners were soon deposited, & melted down by the caustic salt of the Cauldrons, so that he died in 46 hours. In this experiment with sulphur, the mortality of the 30 men was one in the first, & terminated fatally in 6 hours. Do we not now see, that this is owing, except to the very action of the sulphur, which is much rarer? But set the water not by itself, but the blood, & melting the sulphur, to pass off more easily by a pipe? & left some miles distant to take first the action of the sulphur, & overcome the material action of the kidneys, thereby preventing the free excretion of urine, & consequent retention of urine, & death. About ten years ago, I took a jug of 30 pds in the mouth of July, & opening his jugular vein in the afternoon, & injecting with a syringe, the juice of an ounce of the spirit of vitriol, as soon as I had closed & drawn up the arm, the boy was seized with a shivering & shaking, he vomited, & then with great plenty of sweat, he fell down upon the ground, was breathless & soon what he said with consciousness, after a few hours he died.

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I used to get wine when I was young, to mix the wine
syrup with it, and when I was a child I rectified Spirit of
wine. After the injection the dog steered about all
as for half an hour. For hours then it lay down
as if it slept, and as to all the tendons, &c. &c.
He recovered. At this experiment you would be sure to
say the foreign substance can't introduce into the blood
which is living animal without producing death.
Living but a young dog or a pup a little, if it be
a little greater, & then it can't be the mother狗
can't give birth to the expectant, & can't live the
expectant. In setting up the animal, I found the
expectant still & expect to live, & it was strong, but
the other parts were sound.

The distance that the yachts of wine had to go before it
reached the heart, when introduced into the circulation,
the continual motion of it, & its particles in consequence
that motion being separated, all tended in a great
degree to destroy the conserving virtue of that wine,
which was evident in the first experiment, as in all

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by preventing the free circulation of the blood, which always causes the death of the animal.

to the remaining of 1341. I have open'd & examined the jugular vein of a young dog, & injected with a Syringe, four tablets of Admiral. After the injection was over, the animal was up, & the dog was very well & with a great striking of the heart, but he lived but about an hour & a half, 10.3.0. ages 12. 17. 10.

Dr. Edward Mollat in his chapter on Infusions says
"Medicaments subinde cassis capiuntur, et ad am-
pulam traduntur ad 10 g. et 1/2, et 1/4, et 1/8, et
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utriusque sanguinis cum evanescere possit in
metamorphosia in nigritate. et in granularitate in primum
et postea in pigmentum. *Historia sanguinis in foeminae*
Studia. M. D. act 6 de Insipiente, page 436.

In *Acta Acad. Leopoldino-Borussica*, vol. 2, No. 17, year 1803,
page 48 are the following.

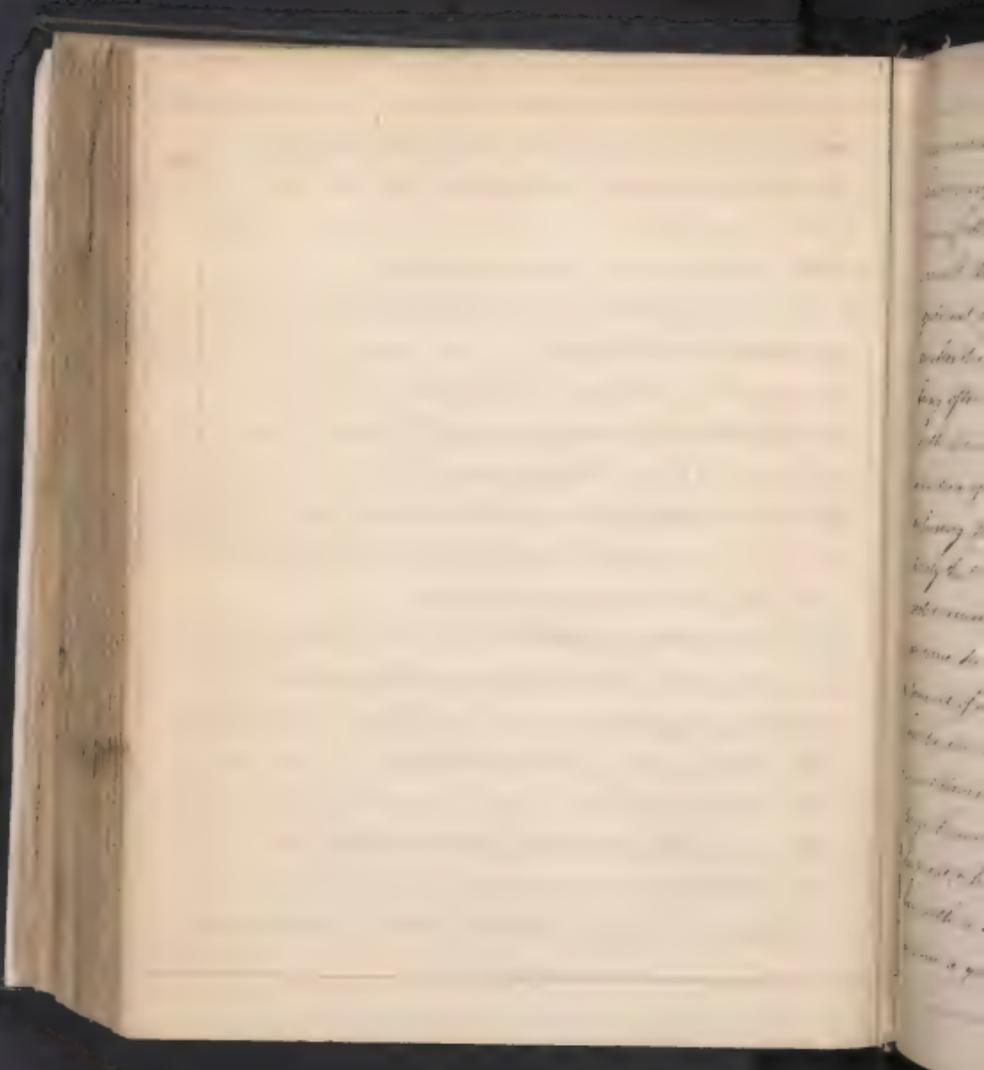
Twenty-five grains of Tobacco, was injected into the vein of a
dog's leg, without producing any effect upon him.
Act 2nd, May 24, 3 year 1803, page 00.

Nineteen grains of snuff of Tobacco, was injected into
the vein of a dog, with the effect of producing very violent
itching, followed by vomiting.

In *Acta Acad. Leopoldino-Borussica*, vol. 1, page 38.

He mentions that Boerhaave, & some others say, that Osmium
or Spiritus Sulphuris, may be injected to the quantity
of one or two drachms, into the veins of a living dog,
without hurting him. The only remark made by the
author upon this is, "See *Acta Acad. Leopoldino-Borussica*."

In the *Philosophical Transactions* is abridged, in the
South-English vol. 3, page 277 of the following specimen



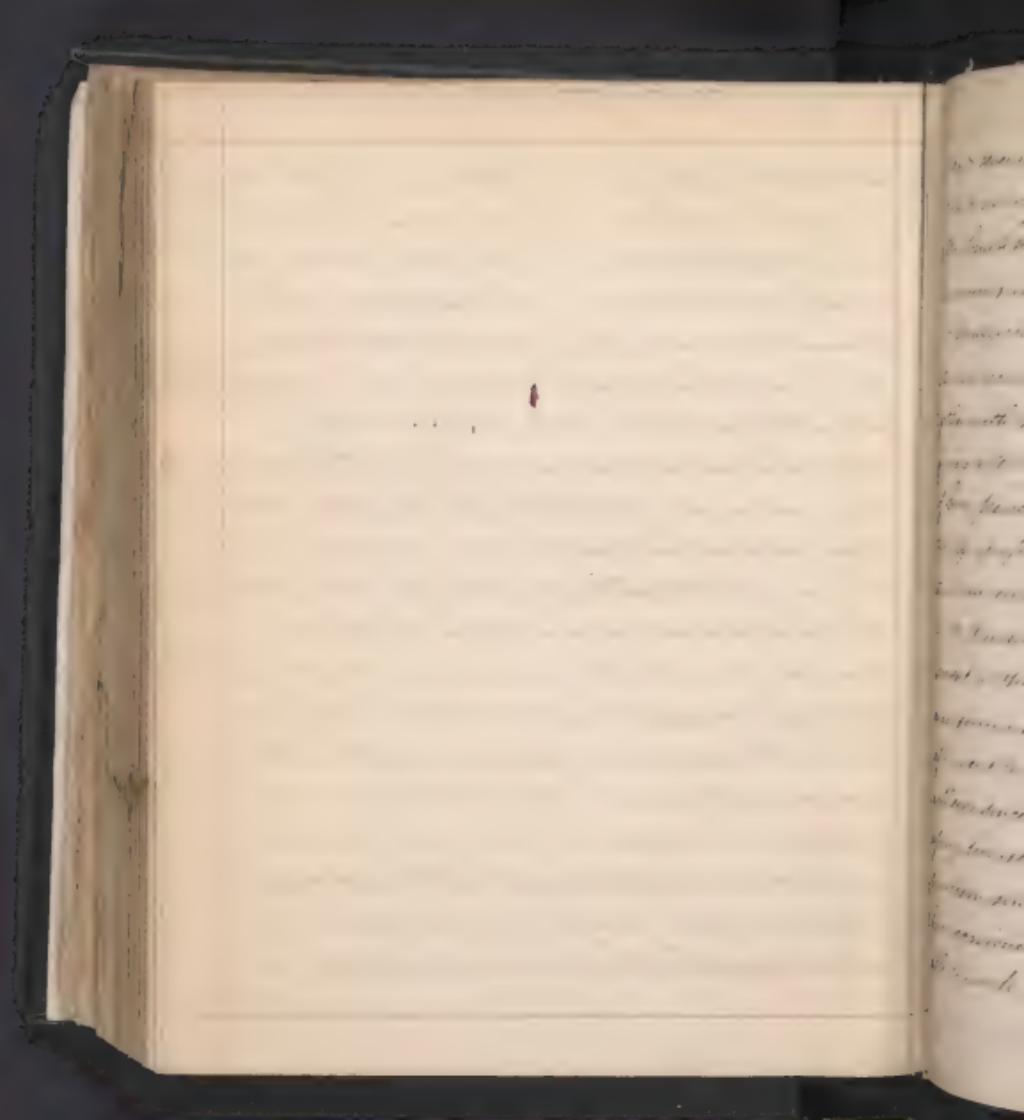
are received. I tracapulic proportion of dimidium, at 6 in the evening, having infused into the jugular & brachial veins of a dog, 1000
grs. of diluted. the animal died presently, & being opened, it will be seen in the vessels was fixed, but that in the
arteries not so well. The author from the above experiment
makes the following reflecting. 1st. That an asphyxial
being often caused, by a like coagulation of the blood, as
hath been observed by the opening made of sundry persons
a little out of their temper, it might be caused by a dog
infusing some difficient into the veins. 2nd. That it is
likely that that will be produced, by which ~~the~~ 2. 500 grs. of
sulphur emulsion without any effusion of blood, consists
(in some such infusion).

2. Some oil of sulphur was injected into the veins of a dog
but he did not die of it. He kept the infusion & was twice
several times operation. In the mean time he was
let go, he went into all the corners of the room, searching
for meat, & having found some bones, he fell a gnawing
them with a strange avidity, as if this liquor had caused
in him a great appetite.



Prosthetic injector about two drachms of a lanolin mixture into the median vein of the right arm of this patient in the Hospital of Derbyshire one of the patients was a lusty robust soldier, dangerous by injector with the usual dose, & by many given, & protracted beatings of the bones in his arms. The completeness of exhaustion in his limbs, but the malady began to operate in about four hours, & continued working till the next day. It must have five good strokes after it. Without any other remedies, there perturbations were gone, & were then no footsteps left of the disease mentioned disease. The two other limbs were much upon the other side.

A married woman, & a serving maid about 20 years of age. Both have been affected with Prosthetic like Com. No. 1. & the appearance no traces of cure, then a strong dose taken, & of course Antiphlogistic, & was injected into the veins of each. The first of these had gentle strokes, some hours after the injection, & the next day. He is recovering even then, but much improved, & soon altogether recovered. The maid had from 6 to 8 the first



try & would be very safe, but by going into the room taking
it, & not observing any heat, she set her self at ease.

Mr. Bushnell has succeeded to open a vein & infuse some
medicines into the blood of two persons in the Hospital
at Worcester, experimentally infected with the pox, when of
them recovered, & the other died. The same Physician to
gether with Mr. Chefford, made the experiment by in-
fusing a strong medicine into the veins of the right arm
of three persons; the one lame of the Foot, the other a
woman of profectrical, & the third reduced to nothing by
heat could distinguish. Dr. Newell of Boston. In saying of this
a Dr. Cushing (whom is the only person I can imagine to be
present at the operation) inferring me was, that the Society
man found himself pretty well the next day, & shortly
after went to a walk, it being his first time. I last saw him
well two days since, in the Hospital Sept 17th 1808. & upon
joining himself cured. The profectrical health not having
permitted since, & the wound, in which the Blue Plaster
had occasioned, are healed. & both these persons are
able to work.

25 October 1890 "I L. L. L. injected into the jugular vein of a dog half an ounce of cold mercury. I observed the dog soon after to have a very stiff gait, which by intervals seized him. About two days after, I found him trembling with a great difficulty of breathing, & making a noise like that of a broken winded horse. The fourth day after the injection of the mercury he died."

In the *Rules of the University of the University of Virginia* by
John Marshall, part 22, lot. 2nd, page 38 we find the following
recommendations. "The *Archbishop* presents a large

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dog, into the vein of his scrotum, & the dog was cured by giving a small dose of a warm solution of Opium in Sack. The effect was not however manifest as long as one could touch the dog, & on the cords wherewith his feet were tied, for he immediately began to nod & reel as he walked; whereupon to prevent his biting, I caused him to be kept awake by whipping, & corrice, after some time brought him to himself, so that he soon grew fat upon it. Next, at just 33 of the same hour, I took a strong & sharp injection into the jugular vein of a dog two, hours & a half off.

1^o however, from the dog, stung on four, minutes less, & effectually to kill the dog, of you 1/2 dr. of opium injected into the jugular vein of a dog, which terminated fatally in a short time.

2^o likewise, of Spirit of Sal ammoniac prepared with quick lime being injected into the jugular vein of a dog, he was within a quarter of an hour comatose over his whole body. The vein being first opened & next the jugular, the point that can not be affected with the strength of the spirit. Spirit appears next, & within 1/2 hour after being given, one of the Spirit was injected, & the dog expired.

3^o same & time of a strong decoction of a common Fox root

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injected into the jugular vein of a dog. Two minutes of an hour, he was taken with a strong & frequent pulsation of the heart & often was with convulsive twitchings. Uniform venous serum may injected, he died convulsed.

The above experiments with several others were performed by him in order to show the manner of action, that different medicaments would have in the blood. When death has ensued, we may reasonably if not to a certainty conclude that the great quantity of the substances employed was the cause, as Mr. Hahnemann has stated in his experiments.

In the manuscript lectures of John Hahnemann, a man whose accuracy is in question, a highly esteemed man in this science, who, however, carries it the extreme, supposing that his experiments were even accurate. In his chapter on the humours, he says: "Foreign matter does or does not disturb the body, has a direct & powerful influence upon all effects, & is many times carried into the blood, by way of conductor or carrier, in the description of retentive humor?"

With a view of ascertaining, the operation of some medicine, when introduced into the blood, he made the following experiments.

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* A weak solution of gunpowder thrown into the system of a dog, without producing any apparent change.

* Two drops of pure sulphuric acid of water, was injected into the same dog.

Equal quantities of vinegar & water, thrown into the circulation of a bitch with young produced miscarriage.

* Nitric acid diluted to the strength of vinegar, in similar circumstances, had no effect.

From these experiments we have to conclude, that it is often the case, that very powerful medicines may be present in the blood, without any visible effect. and that an animal may be ill with disease symptoms may be hidden; these however, produce no apparent effects but may be apparent to a wise operator, for the animal will only recover while the cause remains, for example.

* A strong solution of opium was given into the circulation of a dog, a surgical instrument was applied, upon which being thrown in he lost the use of his limbs, became quiet, moving very little, & quickly, with inward action, & then recovers. The working of the intellects

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into his circulation produces great relaxation. The dog became quiet for an hour & gradually recovered.

1/2 oz. of Laurel water occasions no sensations; his legs are drawn up to his body & relaxed, but lie afterwards relaxed. 1/2 gr. of *Urticaria* powder in 1/2 oz. of water of a dog caused instantaneous sickness which continued nearly an hour. The sickness gives no immediate hint that it is calomel since it has reached the heart. An injection of 1/2 oz. of water containing two grains of Salap soon removes him succeeded by swelling & watery eyes with sneezing & fits, for which he was perfectly well.

* An infusion of 2 lbs. bark hemlock tree & the first few begin to die.

* This produced immediate death.

* Common vinegar has the same effect.

* Diluted silver nitrate kills them very much, but this is not killing.

* An introduction destroyed animals.

* The serum of a puerperal vesicle in a puerperal fever was injected into 6 min. of a bitch. It produced vomiting but she recovered.

* Dr. Hahnem. says that when a cancerous matter is introduced into the blood produces death, it seems to be from the

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For the result of their experience is it appears scarcely posse-
ble that a doubt can be raised by the most skeptical observer
as to the practicability of injecting foreign matter into the
blood, without producing destruction to life.

That great care was taken in the performance of the
experiments, & that accurate statement has been given of
them, it need only be recollect'd that it was then Alauda
who performed them.

In the marginal experiment of Dr. Adam Sykes a gradua-
te in this university; page 48 & 49 are the following specimens.
About five drams of putrid serum were injected into the
caval vein of a bitch. After the injection was finished, she
was placed on the floor & attempted to walk, but was so
weak that she sat down. In an hour & a half after the
injection was performed the appearance was as follows a
time afterwards the bitch

* A dram of serum interluted with a little clear water, covered with
a cover & a half.

18 A dram of fluid matter produced by highly purified oysters.

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with 100 grains of putrid pump. water & a tumbler of
cler. pump. water.

100 grains of putrid blood, titrated with 100 grains
water produced death in Twenty hours.

100 grains of putrid blood in a tumbler & a half of cler. pump. water
were injected into the femoral vein of a bitch 24 hours
after she was opened; perfectly recovered on the day following. She was
perfectly well.

12 grains of putrid blood in a tumbler & a half of cler. pump.
water, were injected into the femoral vein of the bitch
last mentioned. Two days after the experiment she was per-
fectly well.

Half a dram of putrid blood & a dram of cler. pump. water
were injected into the femoral vein of the last mentioned
bitch. She was perfectly well 24 hours after the injection.

40 grains of milt volatile. 8 drachms of oil of turp. &
of 1/4 of cler. pump. water, were injected into the femoral
vein of a bitch. She was perfectly well 48 hours after the injec-
tion.

Was the invention of Dr. Sykes to improve by these experiments

the possibility of the blow of a living animal becoming, from
the two painful & active substances, worse selected to inject.
There was offering the greatest danger of exciting the blood
pulse, if such a thing had been possible: The results of
his experiments as is every well known entirely overthrow
my theoretical opinions, that might be diffused, rated
by those holding an opposite doctrine.

Again the man affording vomiting for the expulsion
of what is sticking in the Stomach, & Intestines, & so
certain, has been proposed & practised by one of the German
Physicians, as he well reported by Dr. Horngreig
that: this man is now expell'd a half a p. of warm wa-
ter & injected by means of a syringe with a long tube into
the warm vein of the arm, he standt a minute & then
vomited violently, & discharged the obstructing substance,
which before was in vain attempted to be digested.

In another singular case, vol. 12. § 13 page 32 of my collection, p. 106.
Mr. ... author of the, wherein he observes, in a catalogue, in
§ 13, page 16. says, under the head of Aggr. in this respect
that "Mais il est des cas, ou le malade a peu de force"

and faint, etc.

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etc. etc.

est un peu le moins de l'ordre, cette production circulante malgre l'interdit, peut faire impression, mais alors, ne vaudrait-il pas mieux que ce soit un peu meilleur, et sans ajouté au danger, peut faire encore meilleur une forme d'espérance ? et que ce soit un macheant qui fasse croire à la mort, cela suffirait peut-être au cataclysme.

Apprendant le résultat de l'assassinat de Louis XIV, en juillet 1661, l'opposition est à l'opposition dans les rangs, et on obtient des succès, contre l'opposition, les sympathisants de l'ordre.

Sieckhause, a publié dans les journaux de l'édition qu'il a été successivement aussi à la manœuvre contre l'ordre, en 1658, et à Mayence en 1659, sur les deux voies d'opposition, les deux voies, sur l'opposition aux deux voies jésuitiques.

Martin Godofroi Steiner a été une première fois dans l'ordre en 1673, dans le couvent de Mayence, et il a été une seconde fois pour se guérir d'une fièvre interne, tout de steinique. On ignore quelles sont les faveurs qu'il a reçues. Sieckhause, à Strasbourg, en 1770, en sposant avec le couvent de Mayence, le couvent de Strasbourg, et l'ordre, dans les deux voies, et à ce titre, l'ordre a été l'ordre de l'opposition à l'ordre.

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un peu à l'infusion de ses pommes, et traité, adoucissant
la pleur, peu de temps, le vomissement, lors un bolant, ou
un purgatif n'ont pas amenuisé la crise, et ne feraient
mille torts qu'on n'ose pas faire. Collectez, si l'on a
de l'omélique dans l'ystole, l'omélique est moins
dure, mais dans une circonstance absolument, n'importe.
Vonmier Médecin allemand, grand partisan de l'infusion, a
bien écrit, en 1773, les expériences de Kochler, et autres, avec
les résultats, non moins, fierme que les leurs.

Une Remoueselle avoit un opisthitis, qui on voulut accélérer par
l'infusion d'eau froide, sur la tête. L'opisthitis ne ayant été
la cause, Vonmier fit le trait d'infuser une cuiller de la soupe de la
giboule à l'académie pour le faire faire. Il réussit, et l'opis-
thitis fut guérie complètement, sans mal, et sans gêne.
Un peu plus tard, il fut atteint d'un purgatif qui l'avait réduit à la mort, et fut
aussi soigné par cette méthode. Le malade n'eut que l'infusion
de la soupe, et une forte tincture, et guérisse en moins d'un jour
à l'opisthitis de cuill. il y eut du malaise, et de la gêne,
mais le temps n'accompagnant, on vit la soupe de l'infusion
dans la veine avec, tout à l'heure, et l'atavie de cette purgation.

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lors, l'ingestion de ces substances, n'aurait pas eu le même
effet. ... Je suis, et les Suisses, et les Francs, également vaincus
; l'infection dans leur population cithinique et ils se débrouillent
les Suisses. On sait que les rommances ayant perdu leur force, il
est difficile de les empêcher. Les chevaux ne sont pas gâtés qu'en
tant qu'ils sont au repos, tandis qu'on peut en venir au
peu d'instants, cet effet de l'infection.

Leila, aquelle de l'armée, introduit à petites doses, par les
singes un peu de sucre, peuvent servir à empêcher que
les chevaux ne se débrouillent. Dans l'armée espagnole il y a
de telles traumatisques, il y a deux ans, et nous avons
encore la débrouillante, bien que trois malades. Les officiers ont
été faits publiquement, dans l'armée, ces officiers et tout
moyens, sur les soldats de cette nation, à l'hôpital de l'Abadie
d'Alcalà, aussi à Madrid tout. ... Au commencement nous avions
fait un bien peu grand nombre d'affaires, qui n'avaient été
comme, dans l'armée, pour faire la propagation des germes, et
ce n'est pas le cas, au contraire, que est dans les malades qu'on
a recueilli, et on peut dire, dans le malade
et malade, on peut faire, et ce sont des affaires qui sont dans le

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medical world, that opposed to the negative details of some substances as a few of positive, thereby demonstrating incommensurability, that some such substances can be introduced into the blood vessels of living animals & of man himself, with perfect safety.

In the eminently respectable & ^{reputable} Vol. 11, page 121 are the 7th number of the Philadelphia Journal of Medical & Physical Science, giving the following specimens of man as a subject, evidence in support of the opinion that *gold*, a substance can be introduced into the blood without producing death.

1. *Two grains* of *mercuric iodide* in a *water* solution, produced violent & yellow stools, &c. No吐.

2. *15 grains* of *Tartar emetic* in a *water* solution, produced violent vomiting in two minutes. In 20. minutes a violent vomiting & purging commenced & in 35. minutes, *see* *no* *...*.

3. *Two grains* of *Mercury* in a *water* solution, produced effects similar to those in the first experiment.

4. *Half a grain* *gold* *tincture* of *mercuric iodide* in *water* except.

5. *One grain* of *water* *gold* in *water* *mercuric iodide* solution, vomiting after 30. minutes, & several stools.

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"injected into the jugular vein of a large Cat, half a dram of Carbonate of Ammonia in half an ounce of warm water. It causes a paroxysm of stryg. the accompanying respiration being rapid. It produces vomition, but no vomiting. The Cat living the day after it vomits but as well as usual."

in a summary of all the experimentalists that I have seen, I find there is not the least possibility of a doubt, that medicines when introduced into the blood, exert their specific action upon the system in a much shorter time than when taken through the medium of the stomach. This being fully established, and undoubtedly in knowing that from the commencement of medical science, we have been authorized by all of the best Physicians to resort to the most active medicines in our practice, when the milder ones have been used without producing any good effect.

It can be proved that the medicines we resort to as the most active articles of the materia medica, are in certain diseases, & when taken in the usual way, either wholly inert, or from the neglect of time required before they produce any effect, the reverse has occurred.

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so far, that it may be deemed imminent, is it not proper for the physician to resort to the injection of these medicaments into the blood vessels, in such that their good effects may be felt by the system ... longer?

What beneficial effects, has any medicine been hitherto tried upon Hydrocephalus?

It is well known that Hydrocephalus has from the earliest ages, been ranked among the Affections medicamentorum; but it still remains so, the ineffectiveness of all the medicines, as yet tried, warrants a just conclusion. Nor although it is impossible for any one to say, that by resorting to the introduction of any medicine into the veins, it will become as curative as any other disease, yet I judge it is equally impossible to say that it will not.

When a physician has seen many cases of it, & wants to be hit by a lucky remedy, remains so great, it can not be supposed that the painful remedy, as before, can ever be found. It should be introduced, can be said, however.

It may be objected a big issue upon the physician, that a sufficient number of trials have not been made to introduce

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this mode of proceeding. If their objections are well grounded, which from the number of facts presented in his opinion, seems rather to be the case, upon which a verdict they might make in these trials. Would they let a human being suffer in the most agonizing torment, without noticing in it however, to avoid the relinquent, terms of death. Could there be a case, in which a Physician would be more justifiable in resorting to this last expedient, than the one before us? Death, must inevitably ensue without it, by resorting to it, we can only say what would be the result.

One thing, is certain, the result in the case before inflicting into the blood, was adopted, could be no worse than in the one where it is not tried. That it will be practised at some future period, I have no doubt, & if by this means the life of one human being, shall be saved, ought it not to be an interment for Physicians to follow, & by following the example of that one, who, in sufficient resolution to throw off the shackles of theological notions, endeavoured to become the last of the opposition statistician. Does not it stand in a great majority of cases prove

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intractable to the remedies, heretofore used?

The remarks, made upon the preceding disease, apply so justly to this, that it will be unnecessary to enlarge upon them.

Is it not frequently in Croup, a source of great regret, that vomiting can not be produced, by any of the usual remedies?

Should a body of any magnitude, be lodged in the Oesophagus, it can neither be pushed into the Stomach, nor can any medicine, past by it, to produce vomiting, nor will the introduction of an Enema, up the rectum, act sufficiently promptly to relieve the patient from insidious death. Under these circumstances, the patient, must die. & the Physician will, have the unpleasant reflection of knowing, that the most powerful & certain remedy was, left untried.

When poison has been taken, the first injunction laid down by all is, to vomit. & how often are their endeavours to do this unavailing?

In the three last cases, how beneficially might the injection

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of an enema into the blood vessels, be reported to, & how many lives could be saved, if the medical world would resolve to profit by the experiments already performed, & the facts occurring therefore.

As it has been performed in so many instances, & in the greater number of them, the result has proved the propriety of it, would not a Physician be very censurable, in neglecting or refusing to perform that, which would be the only means of saving the life of the patient submitted to his care? I could proceed still farther, & apply it to the last stages of a great variety of diseases, but having applied it to a sufficient number to shew the importance of ranking it among the best of the remedies already in use, I will conclude by wishing that this dissertation may meet with the approbation of the medical profession to whom it is addressed.

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